# Bureau of Land Management



# Amarillo Field Office Helium Operations







#### Distribution:

Fluid Minerals Group Manager, Washington Office

NMSO, New Mexico State Director

NMSO, Associate State Director

NMSO, Petroleum Engineer

Field Manager, Amarillo Field Office

Assistant Field Managers (3)

**Team Leaders** 

- -Federal Leased Lands
- -Resources Evaluation & Gas Analysis
- -Division Of Helium Operations, -Engineering and Technical Support

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Amarillo, Texas

Issued: September 20, 2010

\* Revised \*

"Please Note: Data in this report is accurate as of print date; however all data is subject to change."

Approved for distribution: Nelson R. Bullard /s/ Date: 09/20/2010

Helium Enrichment Unit Operations	Мо	nth			
Gas Processed	Gross Volume	Net Helium	Average Percent	Gross FYTD	Net FYTI
Measured Plant Feed (Mcf*, `	611,652	146,990	24.03%	4,657,578	1,140,01
Helium Product (Mcf*)	185,833	145,728	78.42%	1,449,133	1,130,78
Residue Natural Gas (Mcf*)  * Volumes in Mcf at 14.65 psia & 60°F	284,508	0	00.00%	2,105,469	
Natural Gas & Liquids Produced					
Gas Processed				Month	FYT
Natural Gas Sales (Mcf***)				282,380	2,095,81
NGL Sales (gallons)				86,760	675,08
*** Volumes in Mcf at 14.73 psia & 60°F					
Bush Dome Reservoir Operations Conservation gases from all sources	Mo Gross Volume	nth Net Helium	Average Percent	Gross FYTD	Net FYTI
Total Withdrawn (Mcf*)	614,027	152,855	24.89%	4,672,346	1,179,70
Crude Injection (Mcf*)	11,514	9,016	78.31%	172,617	134,75
Crude Production (Mcf*)	8,959	7,003	78.17%	58,932	45,83
Storage Operations Conservation Helium		Month	FYTD	CYTD	Cumulativ
Open Market Sale Volumes (Mcf*)		50,000	825,000	525,000	10,388,60
Conservation Helium in Storage (EOM) (Mcf*)		17,139,553			
* Volumes in Mcf at 14.65 psia & 60°F					
In Kind Helium		Month	FYTD	CYTD	Cumulati
Sale Volumes Transferred (Mcf*)		31,705	119,715	75,818	2,500,99
Sale Volumes Outstanding (Mcf*)		6,830			
* Volumes in Mcf at 14.65 psia & 60°F					
Private Company Helium Storage Contract	s	Мо	nth		Annual
Contact Activity		Gross Volume	Net Helium	Average Percent	Helium FYTD
Crude Acquired (Mcf*)		45,908	30,853	67.21%	341,47
Crude Acquired (MCL)		226,457	171,378	75.68%	1,332,03
. , ,		220,431	,		, ,
Crude Disposed (Mcf*)  Net Balance (Mcf*)		(180,549)	(140,525)		(990,55

Helium Storage Contracts (Charges Billed (\$)	Month	FYTD
Storage Fees Billed (\$)	\$324,960	\$2,291,107
Reservoir Management Fees Billed (\$)	\$237,610	\$1,698,494

Field Compressor Charges (Charges Billed (\$)	Month	FYTD
Funded by the Refiners (provides for booster compression services)	(\$55,910)	(\$458,588)
Cliffside Refiners, LP, by Agreement #GDA010003 (reimburses BLM for fuel, labor, supplies, etc.)	<u>\$11,641</u>	<u>\$104,437</u>
Net-Total (Funded by the Refiners for compression costs.)	(\$44,269)	(\$354,151)

Enrichment Unit Charges (Charges Billed (\$)	Month	FYTD
Reservior Management Fees (RMF)	\$237,610	\$1,698,494
Total operating costs	(\$828,367)	(\$6,528,309)
Sub Total - Items provided by BLM	\$340,697	\$2,626,947
Total - Cliffside Refiners, LP, GDA030001	(\$487.670)	(\$3.901.362)

Conservation Helium - Natural Gas - Liquid Sales	(Charges Billed (\$)	Month	FYTD
Open Market Sales		\$8,417,500	\$42,411,250
In Kind Sales		\$0	\$5,240,722
Natural Gas & Liquid Sales		\$1,229,347	\$10,664,587

Helium Resources Evaluation	Month	FYTD		
Revenue Collected from Federal Lease Holds			\$811,883	\$6,213,135
Helium Sample Collection Report for month	Submitted - 0	Received - 0	Analyzed -	37

	Gross Withdrawal		Net Helium	t Helium Withdrawal Nitrogen		Methane		Ethan	Ethane plus		Other (CO2, Ar, H2)		
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
<u>TOTAL</u>		614,027	184,147,154	152,855	32,373,762	153,361	45,237,815	273,311	95,483,982	29,242	9,525,425	5,259	1,526,171
BIVINS A-3	May-10	0	10,086,632	0	3,083,333	0	2,553,540	0	3,992,174	0	389,627	0	67,958
BIVINS A-6	May-10	8,959	8,220,871	7,003	4,757,900	1,728	2,030,877	166	1,279,254	0	122,837	62	30,003
BIVINS A-13	May-10	55,799	5,358,883	27,055	3,221,421	13,928	1,398,733	12,975	644,801	1,434	68,198	407	25,730
BIVINS A-14	May-10	66,185	5,912,967	37,108	3,927,073	16,526	1,510,577	10,887	407,281	1,168	41,805	496	26,232
BIVINS A-4	May-10	40,301	11,021,286	11,115	1,949,373	9,868	2,669,525	17,104	5,737,493	1,848	569,065	365	95,829
BUSH A-2	May-10	40,294	10,193,689	8,968	1,544,275	10,173	2,482,768	18,799	5,524,505	2,068	553,128	286	89,013
Injection	May-10	11,514	66,237,653	9,016	47,843,737	2,207	17,067,163	210	775,632	1	23	80	551,098
inj Bivins A-3	May-10	0	(25,652,315)	0	(18,384,452)	0	(6,554,549)	0	(332,777)	0	0	0	(380,537)
inj Bivins A-6	May-10	(11,514)	(24,198,128)	(9,016)	(17,511,600)	(2,207)	(6,436,899)	(210)	(138,166)	(0)	(12)	(80)	(111,452)
inj Bivins A-13	May-10	0	(6,490,417)	0	(4,706,191)	0	(1,656,853)	0	(122,391)	0	(2)	0	(4,980)
inj Bivins A-14	May-10	0	(6,501,333)	0	(4,767,421)	0	(1,602,106)	0	(126,303)	0	(7)	0	(5,497)
inj Bivins A-4	May-10	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	May-10	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	May-10	8,959	1,152,511	7,003	850,879	1,728	247,075	166	43,767	0	2,911	62	7,880
BIVINS A-1	May-10	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	May-10	26,350	12,465,203	1,792	1,807,308	6,283	3,067,131	16,319	6,815,404	1,713	673,704	242	101,656
BIVINS A-5	May-10	29,451	13,855,992	7,708	1,587,690	7,485	3,376,636	12,629	7,976,473	1,405	793,263	224	121,930
BIVINS A-7	May-10	31,002	10,044,736	10,486	2,217,260	8,068	2,515,052	10,995	4,760,202	1,246	478,191	208	74,030
BIVINS A-9	May-10	26,350	8,969,636	545	167,832	6,806	2,188,869	16,998	5,934,127	1,793	595,401	208	83,407
BIVINS A-11	May-10	26,359	4,890,521	656	95,658	6,748	1,205,397	16,931	3,216,023	1,785	327,145	240	46,299
BIVINS A-15	May-10	41,323	7,823,194	853	394,619	9,789	1,867,955	27,415	4,986,154	2,797	496,410	469	78,057
BIVINS B-1	May-10	26,351	6,055,723	982	246,106	6,436	1,464,055	16,902	3,892,062	1,764	394,399	266	59,102
BIVINS B-2	May-10	26,350	4,765,199	503	89,420	6,743	1,184,498	16,922	3,111,574	1,766	317,875	416	61,832
BUSH A-1	May-10	0	5,721,962	0	104,140	0	1,356,677	0	3,830,281	0	374,216	0	56,647
BUSH A-3	May-10	34,101	9,845,552	16,820	1,964,184	8,738	2,416,356	7,405	4,890,417	858	487,546	280	87,048
BUSH A-4	May-10	24,801	7,049,860	5,518	1,318,996	6,353	1,754,189	11,519	3,565,278	1,262	358,716	149	52,681
BUSH A-5	May-10	40,301	13,566,213	13,499	2,910,536	10,276	3,392,484	14,657	6,513,924	1,635	651,893	234	97,377
BUSH A-8	May-10	17,050	3,219,287	315	58,928	4,218	773,236	11,115	2,136,051	1,151	213,771	251	37,300
BUSH A-9	May-10	0	3,649,336	0	94,042	0	877,071	0	2,406,010	0	239,027	0	33,186
BUSH A-11	May-10	26,349	3,640,883	900	106,665	6,323	869,934	17,030	2,382,923	1,769	240,824	327	40,537
BUSH B-1	May-10	0	3,138,215	0	58,930	0	744,258	0	2,098,229	0	205,972	0	30,826
FUQUA A-1	May-10	0	2,954,072	0	53,853	0	702,792	0	1,975,157	0	193,571	0	28,699
FUQUA A-2	May-10	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	May-10	26,351	8,878,515	1,029	562,920	6,872	2,166,890	16,540	5,521,311	1,781	554,497	129	72,896
TT Fuel	May-10	0	0	0	0	0	0	0	0	0	0	0	0
	fie	ld-wide pcts		24.89%	17.58%	24.98%	24.57%	44.51%	51.85%	4.76%	5.17%	0.86%	0.83%

Latest estimates of reserves and feed to HEU

Based on NITEC's 2003 reserves study from NITEC's interim report

est z-factor

0.980

Volumes in BCF As of EOM May-10 Initial Gas In Place 330.040 Produced 1924 to 1961 48.830 Injected 1924 to 1961 0.450 281.660 Remaining Gas In Place 1961 Left Behind Pipe, 1961 82.060 ====> 1.500 BCF of contained helium Remaining in Place, 1961 199.600 Gas In Place 1961 199.600 Produced 1961 to July 2002 82.450 Injected 1961 to July 2002 64.510 Net Helium Remaining Gas In Place July 2002 181.660 33.997 Produced July 2002 through Dec 2002 1.096 0.743 Production 2003 - 08 11.109 48.814 Injection 2003 - 08 (1.100)(0.614)Produced to Date 2009 2.954 2.929 Injected to Date 2009 (0.360)(0.085)Amount of Raw Gas Available to CHEU 129.982 ====> 20.189 total helium in reservoir Estimated Bottom Hole Pressure 478.537

\* All volumes on Table 2 are reported in Mcf at 14.65 psia & 60°F

## Crude Helium Enrichment Unit Operations

		Gross W	/ithdrawal	Net Helium	Withdrawal	Nitr	ogen	Met	hane	Ethar	ne plus	Other (C0	O2, Ar, H2)
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
Measured Feed	May-10	611,652	49,240,222	146,990	12,401,575	153,211	12,380,052	276,708	21,725,856	29,492	2,316,142	5,252	416,597
Calculated Feed	May-10	605,068	49,024,601	145,852	12,411,147	151,633	12,327,558	273,144	21,566,155	29,241	2,304,667	5,197	415,074
Feed to Box	May-10	601,193	48,734,888	145,852	12,411,326	151,633	12,327,640	273,144	21,566,200	29,241	2,304,674	1,323	125,048
Cheu Product	May-10	185,833	15,585,562	145,728	12,225,636	35,453	2,948,234	3,357	303,385	5	338	1,291	107,970
Residue	May-10	284,508	21,670,162	0	1,287	7,474	535,124	252,426	19,211,524	24,608	1,920,999	0	1,228
Cold Box Vent	May-10	101,016	8,601,509	71	82,812	93,453	7,477,968	7,472	980,620	0	137	21	59,973
Flare/Boot Strap	May-10	0	807,377	0	42,077	0	322,252	0	347,177	0	90,678	0	5,193
Fuel From Cheu	May-10	10,854	698,422	0	245	369	20,464	8,783	566,573	1,702	111,140	0	0
Shrinkage/Loss	May-10	2,926	176,298	0	0	0	0	0	0	2,926	176,298	0	0
Unaccounted*	May-10	16,057	1,224,500	53	56,446	14,885	1,036,646	1,107	128,679	(0)	1,083	11	1,646

\*Before October 2004, the values are estimated

# Storage Operations Inventory (contained helium)

redeliveries

	Government	Private
Beginning inventory	17,225,009	672,165
net acceptances +	0	0

(31,705) In Kind Transfers Open Market Sales (50,000)Gain/loss (3,751)Ending Inventory 17,139,553 613,345 Total Helium in Reservoir 20,189,366 Total Helium in Storage 17,752,898 Helium in native gas 2,436,467

#### Crude Helium Pipeline

Private

(140,525)

31,705

50,000

0

Crude riellani ripellile			
_	Gross	Net Helium	Percent
Beginning inventory	47,305	35,549	75.15%
Measured to Pipeline (Private Plants)	46,024	30,906	67.15%
Measured from Pipeline (Private Plant:	226,573	171,384	75.64%
HEU Production	185,833	145,728	78.42%
Injection	11,514	9,016	78.31%
Production	8,959	7,003	78.17%
Ending Inventory	46,125	35,036	75.96%
Gain/Loss	(3,909)	(3,751)	

## Tuck Trigg Reservoir Operations

	-		Since Field
Native Gas (Gross)	Month	Fiscal Year	Discovery
Total in place, beg. of period	5,198,688	5,198,688	5,890,000
Recoverable in place, beg. of period	4,528,688	4,528,688	5,220,000
Production during period to date	0	0	691,312
Total in place, end of month	5,198,688	5,198,688	5,198,688
Recoverable in place, end of month	4,528,688	4,528,688	4,528,688

<sup>\*</sup> All volumes on Table 3 are reported in Mcf at 14.65 psia & 60°F

		onani o							Way 2010
	NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges Billed (\$)**
In Kind Heliu	m								
AirGas South We Month FYTD	st, Contract no	. INC98-0101							(billed quarterly)
AirGas North Cen	tral, Contract i	no. INC98-010	02						
Month									
FYTD	stain Camtuant	no INC00 04	02						
AirGas Intermour Month FYTD	itain, Contract	110. INC96-01	US						
Air Liquide Heliur Month FYTD	n America, Inc	., Contract no	o. INC98-	0104					
Air Products, L.P. Month FYTD	., Contract no.	INC98-0105							
Linde Gas North	America, LLC,	Contract no.	INC98-01	06					
Month FYTD									
Corp Brothers, In	c., Contract no	. INC98-0107	•						
Month FYTD									
FIBA Technologie	es, Inc., Contra	ct no. INC98-	-0108						
Month									
FYTD  General Air Servi	ce & Supply Co	Contract n	o INCOS	-0100					
Month FYTD	ce a Supply Co	o., Contract i	io. iivoso	-0109					
Jack B. Kelley Co Month FYTD	., Contract no.	INC98-0110							
Portland Welding Month FYTD	Supply, Contr	act no. INC98	3-0111						
Praxair, Inc., Con Month FYTD	tract no. INC98	3-0112							
United States We Month FYTD	lding, Inc., Cor	ntract no. INC	98-0113						
Matheson Tri-Gas Month FYTD	s, Inc., Contrac	t no. INC98-0	1114						
GT & S, Contract Month FYTD	no. INC00-011	5							
Total month	0	0	0	0	0	0	0	0	\$0
Total FYTD	49,841	3,749	3	1,175	13,384	15,785	83,937	82,641	\$5,240,722
Total CYTD	21,890	1,865	0	197	4,353	10,828	39,132	38,528	\$2,494,688
Cumulative	1,497,677	71,853	227	268,164	336,607	372,721	2,547,249	2,507,752	\$134,828,483
In Kind Trans	sfers						Month	FYTD	CYTD Cumulative
Transferred Volume outstanding							31,705 6,830	119,715	75,818 2,500,997

<sup>\*</sup> Volumes in Mcf at 14.7 psia & 70°F

<sup>+</sup> Volumes in Mcf at 14.65 psia & 60°F

# **Helium & Natural Gas Sales**

Air Liquide Helium America, Inc.         0         <		Award Volume*	Outstanding*	Sales*	Cha	rges Billed (\$)**
Month	Conservation Helium					(billed quarterly)
FYTD         0         0         0         0           Cumulative         77,000         \$4,25           Air Products, L.P.         0         0         0           Month         0         0         0         0           FYTD         550,000         350,000         200,000         \$12,95           Cumulative         4,209,400         35,300         200,000         \$223,36           Linde Gas North America, LLC         0         (130,000)         130,000         \$8,41           FYTD         305,000         0         305,000         \$305,000         \$305,000         \$305,000         \$19,72           Cumulative         3,534,000         0         0         0         0         \$200,45           Keyes Helium Co., LLC         0         0         0         0         0         0         0         \$200,45           Keyes Helium Co., LLC         0         0         0         0         0         0         0         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45         \$200,45 <th>Air Liquide Helium America, Inc.</th> <th></th> <th></th> <th></th> <th></th> <th></th>	Air Liquide Helium America, Inc.					
Cumulative         77,000         \$4,25           Air Products, L.P.         0         0         0           FYTD         550,000         350,000         200,000         \$12,95           Cumulative         4,209,400         350,000         200,000         \$23,36           Linde Gas North America, LLC         0         (130,000)         130,000         \$8,41           FYTD         305,000         0         305,000         \$19,72           Cumulative         3,534,000         0         305,000         \$200,45           Keyes Helium Co., LLC         0         0         0         0           Cumulative         548,200         548,200         \$31,75           Matheson Tri-Gas, Inc.         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           FYTD         0         0         0         0           FYTD         0         0         0         0           Cumulative         10,000         10,000         \$35,60           Praxair, Inc.         0         0         0         0           Month <th>Month</th> <th>0</th> <th>0</th> <th>0</th> <th></th> <th>\$0</th>	Month	0	0	0		\$0
Air Products, L.P.	FYTD	0	0	0		\$0
Month	Cumulative	77,000		77,000		\$4,258,500
FYTD         550,000 4,209,400         350,000 3,859,400         200,000 3,859,400         \$223,36           Linde Gas North America, LLC         O (130,000)         130,000 3,859,400         \$8,41           FYTD         305,000 0 305,000         3,534,000         \$19,72           Cumulative         3,534,000         3,534,000         \$200,45           Keves Helium Co LLC         0 0 0 0 0         0 0 0         0 0 0           FYTD         0 0 0 0 0 0 0 0         0 0 0 0 0         \$31,75           Matheson Tri-Gas, Inc.         0 0 0 0 0 0 0 0 0 0         \$31,75           Month         0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Air Products, L.P.					
Cumulative         4,209,400         3,859,400         \$223,36           Linde Gas North America, LLC         0         (130,000)         130,000         \$8,41           FYTD         305,000         0         305,000         \$19,74           Cumulative         3,534,000         \$200,45           Keves Helium Co., LLC         0         0         0           Month         0         0         0         0           FYTD         0         0         0         \$31,75           Matheson Tri-Gas, Inc.         0         0         0         0         \$31,75           Month         0         0         0         0         \$56         \$31,75           Month         0         0         0         0         \$31,75 <td>Month</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td>\$0</td>	Month	0	0	0		\$0
Linde Gas North America, LLC	FYTD	550,000	350,000	200,000		\$12,950,000
Month         0         (130,000)         130,000         \$8,41           FYTD         305,000         0         305,000         \$19,74           Cumulative         3,534,000         \$200,45           Keves Helium Co LLC         0         0         0           Month         0         0         0         0           FYTD         0         0         0         \$31,75           Matheson Tri-Gas, Inc.         0         0         0         0         \$31,75           Month         0         0         0         0         \$31,75 <td>Cumulative</td> <td>4,209,400</td> <td></td> <td>3,859,400</td> <td></td> <td>\$223,369,250</td>	Cumulative	4,209,400		3,859,400		\$223,369,250
FYTD         305,000         0         305,000         \$19,74           Cumulative         3,534,000         \$200,45           Keyes Helium Co LLC         0         0         0         0           Month         0         0         0         0         0           FYTD         0         0         0         0         \$31,75           Matheson Tri-Gas, Inc.         0         0         0         0         0         0         0         7         0         0         0         0         0         \$31,75         0         0         0         0         \$31,75         0         0         0         0         \$31,75         0         0         0         0         \$31,75         0         0         0         0         0         \$31,75         0<	Linde Gas North America, LLC					
Cumulative         3,534,000         \$200,45           Keyes Helium Co., LLC         Month         0         0         0           FYTD         0         0         0         0           Cumulative         548,200         \$31,75         \$31,75           Matheson Tri-Gas, Inc.         Month         0         0         0           FYTD         0         0         0         0           Cumulative         10,000         10,000         \$55           Praxair, Inc.         0         0         0         \$9,71           Cumulative         2,290,000         0         \$150,000         \$9,71           Cumulative         2,290,000         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$42,41           Total CYTD         780,00	Month	0	(130,000)	130,000		\$8,417,500
Note	FYTD	305,000	0	305,000		\$19,748,750
Month         0         0         0           FYTD         0         0         0           Cumulative         548,200         \$31,75           Matheson Tri-Gas, Inc.         State of the control of t	Cumulative	3,534,000		3,534,000		\$200,451,250
FYTD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Keyes Helium Co., LLC					
Cumulative         548,200         \$31,75           Matheson Tri-Gas, Inc.         Month         0         0         0           FYTD         0         0         0         0           Cumulative         10,000         10,000         \$58           Praxair, Inc.         0         0         0         0           FYTD         150,000         0         150,000         \$9,71           Cumulative         2,290,000         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	Month	0	0	0		\$0
Matheson Tri-Gas, Inc.         Month         0         0         0           FYTD         0         0         0         0           Cumulative         10,000         10,000         \$58           Praxair, Inc.         Month         0         0         0         0           FYTD         150,000         0         150,000         \$9,71         \$9,71         \$1,000         <	FYTD	0	0	0		\$0
Month         0         0         0           FYTD         0         0         0           Cumulative         10,000         10,000         \$58           Praxair, Inc.         0         0         0         0           Month         0         0         0         150,000         \$9,71           Cumulative         2,290,000         0         150,000         \$9,71           Cumulative         2,290,000         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	Cumulative	548,200		548,200		\$31,759,900
FYTD 0 0 0 0 10,000 \$58  Praxair, Inc.  Month 0 0 0 150,000 \$9,71  Cumulative 2,290,000 \$133,65  Linde Gas, LLC discontinued 10 2008  Month 0 0 0 0 0  FYTD 0 0 0 0 0  FYTD 0 0 0 0 0  Total month 0 0 (130,000) 130,000 \$8,41  Total FYTD 1,005,000 350,000 655,000 \$42,41  Total CYTD 780,000 430,000 \$27,84	Matheson Tri-Gas, Inc.					
Cumulative         10,000         \$58           Praxair, Inc.         Month         0         0         0         0         58           Month         0         0         0         150,000         \$9,71           Cumulative         2,290,000         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	Month	0	0	0		\$0
Praxair, Inc.         Month         0         0         0           FYTD         150,000         0         150,000         \$9,71           Cumulative         2,290,000         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	FYTD	0	0	0		\$0
Month         0         0         0           FYTD         150,000         0         150,000         \$9,71           Cumulative         2,290,000         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	Cumulative	10,000		10,000		\$587,500
FYTD         150,000         0         150,000         \$9,71           Cumulative         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	Praxair, Inc.					
Cumulative         2,290,000         2,290,000         \$133,65           Linde Gas, LLC discontinued 10 2008         0         0         0         0           Month         0         <	Month	0	0	0		\$0
Linde Gas, LLC discontinued 10 2008         0         0         0         0           Month         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	FYTD	150,000	0	150,000		\$9,712,500
Month         0         0         0         0           FYTD         0         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84		2,290,000		2,290,000		\$133,652,500
FYTD         0         0         0           Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	Linde Gas, LLC discontinued 10 2008					
Cumulative         200,000         200,000         \$11,03           Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84		0	0	0		\$0
Total month         0         (130,000)         130,000         \$8,41           Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	FYTD	0	0	0		\$0
Total FYTD         1,005,000         350,000         655,000         \$42,41           Total CYTD         780,000         430,000         \$27,84	Cumulative	200,000		200,000		\$11,035,000
Total CYTD 780,000 430,000 \$27,84		0	(130,000)	130,000		\$8,417,500
		1,005,000	350,000	655,000		\$42,411,250
Cumulative   10.868.600   10.518.600   \$605.11		1 ' 1		· ·		\$27,842,500
1,111,111	Cumulative	10,868,600		10,518,600		\$605,113,900
Open Market Transfers   Month   FYTD   CYTD   Cum	Open Market Transfers		Month	FYTD	CYTD	Cumulative
Transferred 50,000 825,000 525,000 10,38	Transferred		50,000	825,000	525,000	10,388,600
Volume outstanding 130,000	Volume outstanding		130,000			

<sup>\*</sup> Volumes in Mcf at 14.65 psia & 60°F

**Natural Gas/Liquid Sales** 

	<u> </u>				
	Natural Gas (Mcf)***	NGLs (gal)		Avg Btu Value	Charges Billed (\$)**
El Paso Natural Gas	<u>ş</u>	Provides Measured F	irm/Interruptible Trans	sportation Services	(billed monthly)
Month	282,380		308,966	1,094	(\$30,178)
FYTD	2,095,810		2,294,533	1,095	(\$238,567)
Cumulative	21,181,685		23,306,418	1,100	(\$2,409,433)
Minerals Manageme	ent Service	Provides Natural Gas	Marketing Services		
Month					\$0
FYTD					(\$15,119)
Cumulative					(\$174,371)
<u>Tenaska</u>		Purchaser - Natural Gas		\$\$/Unit	
Month			307,143	\$3.747400	\$1,150,988
FYTD			2,277,170	\$4.390752	\$9,998,488
Cumulative			23,158,484	\$5.734809	\$131,988,591
<u>SemCrude</u>		Purchaser - Natural C	Sas Liquids		
Month		86,760	9,271	\$11.707177	\$108,537
FYTD		675,084	72,135	\$12.750886	\$919,785
Cumulative		5,601,874	598,028	\$11.559431	\$6,912,863
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)	Total (\$\$)
Total month	282,380	86,760	316,414	\$3.885249	\$1,229,347
Total FYTD	2,095,810	675,084	2,349,305	\$4.539465	\$10,664,587
Total CYTD	1,337,387	422,019	1,493,811	\$4.633423	\$6,921,458
Cumulative	21,181,685	5,601,874	23,756,512	\$5.772672	\$136,317,650

<sup>\*\*\*</sup> Volumes in Mcf at 14.73 psia & 60°F

All Volumes in Mcf at 14.7 psia & 70°F

Revenue Collected From Federal Leaseholds	Month*	FYTD*
Fee Sales & Royalties	\$809,157	\$6,194,089
Natural Gas Royalties (1)	\$624	\$4,439
Natural Gas Rentals	\$0	\$640
Other	\$13,968	<u>\$134,660</u>
Revenue Collected from Federal Lease Holds	\$811,883	\$6,213,135

<sup>\*</sup>Totals do not sum

Helium Analysis and Evaulation	Month	FYTD
Number of Sample Request Letters Sent	0	0
Number of Samples Received	0	0
Number of Samples Analyzed	0	1
Total Number of Samples Analyzed For Resources Division	0	19
Total Number of Other Samples Analyzed (2)	37	209

# **U. S. Helium Production**

Domestic	FY Volume		CY Volume
2003 Helium Sold	4,621,000		4,393,555
2004 Helium Sold	4,675,800		4,692,699
2005 Helium Sold	4,936,900		4,800,782
2006 Helium Sold	4,943,900		4,944,544
2007 Helium Sold	4,941,200		4,965,176
2008 Helium Sold	4,767,400		4,668,286
2009 Helium Sold	4,325,300		4,238,881
Estimated Helium Resources as of 12/31/2006(Mcf)			732,000,000

		FY-2009	CY-2009
U.S. Helium Exports	(3)	2,631,905	2,563,080

- (1) Includes drip gas sales & other miscellaneous gas sales.
- (2) Includes pipeline, field survey, and other requested analyses.
- (3) Data from Department of Commerce Bureau of the Census.

All volumes	in Mict at 14.	os psia o		ed Gas			Tronofo	erred Gas	Ctorod	Chara	es Billed
	Gross Gas F	lalium %	Helium	eu Gas	Helium			elium	Stored Helium		\$)**
		Month	Hellulli	FYTD	CYTD	Cumulative	Month	Cumulative	EOM	Month	Ψ) FYTD
Total All Contra	cts*		<u> </u>								
Crude Acquired	45,908	67.2%	30,853	341,479	190,333	29,374,072	127,859	41,313,935			
Crude Disposed	226,457	75.7%	171,378	1,332,037	837,168	39,529,193	46,154	29,066,751		\$324,960	Storage Fees
Grade-A Rdlvrd	0		0	0	0		-, -	,,,,,,		\$237,610	RMF Fees
Net/Balance	(180,549)		(140,525)	(990,558)	(646,835)	(11,633,839)	81,705	12,247,184	613,345	\$562,570	\$3,991,935
<b>Total Prior Cont</b>		NATED)	, ,	, , ,	, ,		,				. , , ,
Crude Acquired	•	,		0	0	17,406,129	0	18,196,898			
Crude Disposed				0	0	11,830,863	0	19,148,768			
Grade-A Rdlvrd				0	0	1,478,718					
Number of trailers				0	0	9,834			0		
<b>Linde Gas Nortl</b>	h America, LL	C, Contra	ct no. 199	5-3249							
Crude Acquired	ŕ	•									
Crude Disposed											
Net/Balance											
Praxair, Inc., Co	ntract no. 199	95-3251									
Crude Acquired											
Crude Disposed											
Net/Balance											
Air Products, L.	P., Contract n	o. 1995-3	256								
Crude Acquired											
Crude Disposed											
Net/Balance											
ExxonMobil Gas	s Marketing C	o., Contra	ct no. 199	5-3280							
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Pioneer Natural</b>	Resources U	SA, Inc, C	ontract no	o. 1995-3286	;						
Crude Acquired											
Crude Disposed											
Net/Balance											
Keyes Helium C	o., LLC, Cont	ract no. 1	995-3287								
Crude Acquired											
Crude Disposed											
Net/Balance											
Air Liquide Heli	um America, I	nc., Conti	ract no. 20	03-3284							
Crude Acquired											
Crude Disposed											
Net/Balance											
Matheson Tri-G	as, Inc., Conti	ract no. 20	007-3288								
Crude Acquired											
Crude Disposed											
Net/Balance											
Airgas Merchan	it Gases, Con	tract no. 2	009-3290								
Crude Acquired											
Crude Disposed											
Net/Balance											

G	Government Helium						
Remaining Crude Acquired beginning of the month							
С	Crude Disposed: In Kind Sales transferred for the month	(31,705)					
	Open Market/Reserve Sell Down transferred for the month	(50,000)					
	Gains and Loses for the month	<u>(3,751)</u>					
Ν	Net/Balance of Purchased Helium Remaining for Sale	17,139,553					

<sup>\*</sup>Includes In Kind and Open Market transfers from Government storage

\*\*Rounded to nearest dollar

Field/CHEU Compressor Operations		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$3.75	\$4.41	\$5.72
Fuel used *	total MMBTU	12,482	99,807	1,010,507
Field compressor fuel revenue *	\$dollars	\$1,414	\$10,148	\$646,710
HEU compressor fuel credit *	\$dollars	\$29,335	\$269,417	\$3,055,963
HEU fuel credit *	\$dollars	\$16,059	\$160,193	\$2,081,623
#1 Compressor run time *	hours	437	4,504	58,168
#2 Compressor run time *	hours	426	4,141	38,542
#3 Compressor run time *	hours	625	2,907	27,549

<sup>\*</sup> Field/CHEU Compressor Operations based on May 10 activity

Field Compressor Charges Charges Charges Billed (\$)			(\$)*
Linde Gas North America, LLC, Contract no. 1995-3249			
Praxair, Inc., Contract no. 1995-3251			
Air Products, L.P., Contract no. 1995-3256			
Keyes Helium Co., LLC, Contract no. 1995-3287			
SubTotal - Cliffside Refiners, LP (provides booster compression services)	(\$55,910)	(\$458,588)	(\$7,475,593)
Cliffside Refiners, LP, GDA010003 (BLM provided fuel *, labor, supplies, etc.)	<u>\$11,641</u>	<u>\$104,437</u>	<u>\$1,852,982</u>
Net Total - Cliffside Refiners, LP	(\$44,269)	(\$354,151)	(\$5,622,612)

<sup>\*</sup> BLM provided fuel cost is based on Mar 10 fuel consumed

\*Rounded to nearest dollar

Crude Helium Enrichment Unit (CHEU)	Мо	nth	FY	TD	Cumulative
CHEU Runtime	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	744	100.0%	5,741	98.4%	58,842
Producing residue gas	744	100.0%	5,691	97.6%	58,357
Producing helium product	744	100.0%	5,695	97.6%	55,490
Producing natural gas liquids	744	100.0%	5,701	97.8%	54,005

	Charges Billed (\$)*			
CHEU Charges	Month	FYTD	Cummulative	
Reservior Management Fees (RMF)	\$237,610	\$1,698,494	\$15,141,920	
Total operating costs	<u>(\$828,367)</u>	(\$6,528,309)	(\$73,806,879)	
Labor	\$102,247	\$817,974	\$6,124,683	
Compressor fuel cost Mar 10	\$34,291	\$254,606	\$3,049,998	
HEU fuel cost Mar 10	\$21,039	\$151,865	\$2,095,068	
Electrical power cost Mar 10	\$130,469	\$981,294	\$10,860,619	
Other	<u>\$52,651</u>	<u>\$421,207</u>	<u>\$7,657,756</u>	
Sub Total - Items provided by BLM	\$340,697	\$2,626,947	\$32,997,479	
Total - Cliffside Refiners, LP, GDA030001	(\$487,670)	(\$3,901,362)	(\$40,809,400)	

\*Rounded to nearest dollar

CHEU Utility Usage	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage May 10	3,724	31,586	322,339
Cheu Pure Water Usage (gallons) May 10	992	9,829	228,326
Electricity Metered (Kwh) consumed Mar 10	2,783,244	22,411,922	189,234,706